## SPECIFICATION AMENDMENTS

On page 1, insert above line 1, insert--Priority Claim

The present application claims priority on European Patent Application 03077544.9 filed August 11, 2003.--

On page 1, delete line 1.

On page 1, above line 2, insert--Field of the Invention--

On page 1, above line 5, insert--Background of the Invention--

On page 2, delete line 3-6.

The paragraph on line 8 of page 2, ending on line 2 of page 3, has been amended as follows:

--The method according to the invention for installing a double ended distributed sensing optical fiber assembly within a guide conduit ~~comprises~~, the method comprising:

-providing a nose section, which interconnects the first proximal ends to the second proximal end ~~of two sections of distributed sensing fiber optical cable~~ such that light transmitted along the length of ~~one section of fiber optical cable~~ is transmitted via the nose section into the other section of fiber optical cable;

-inserting the nose section into the guide conduit such that the nose section moves through the guide conduit ahead of the first elongate section and second elongate section; and ~~said two sections of distributed sensing fiber optical cable that are interconnected thereby~~; and

-connecting the first distal ends and second distal end ~~of the sections of distributed sensing fiber optical cable~~ to a light transmission and receiving unit; ~~and~~

- wherein the nose section has an outer width (W) which is less than 1 cm the nose section and the ~~two sections of distributed sensing fiber optical cable interconnected thereby~~ first elongate section and second elongate section are formed from a single fiber optical cable, which is bent into a U-shaped configuration in ~~the~~ a region of the nose section and the fiber optical cable is stretched in ~~said~~ the region of the nose section such that the fiber optical cable has a smaller width in the region of the nose section than in most other parts of the fiber optical cable.--

On page 3, above line 3, insert the following paragraph:

--The invention also relates to a method of producing oil and/or gas, wherein the temperature and/or pressure of fluids flowing through at least part of an inflow region of an oil and/or gas production well is monitored by a double ended distributed sensing fiber optical assembly which is installed in accordance with the method according to the present invention.--

On page 3, delete line 3-33

On page 4, delete line 1-23.

Paragraph on line 25 of page 4 has been amended as follows:

--Several non-limitative embodiments of the method according to the invention will be described in more detail and by way of example with reference to the accompanying drawings, in which:

Fig. 1 depicts a guide conduit which contains a double ended distributed sensing fiber optical cable assembly that has a nose section in which a U-folded section of the optical fiber is embedded; and

Fig. 2 depicts a guide conduit which contains a double ended distributed sensing fiber optical cable assembly that has a nose section in which light emitted from one fiber optical cable section is reflected into another fiber optical cable section.

On page 5, above line 8, amend the title as follows:--Detailed Description of ~~Preferred Embodiments of the Invention~~ the Invention--

Paragraph on line 8 of page 5 has been amended as follows:

--Fig.1 depicts an elongate guide conduit 1, which contains a double ended fiber optical sensing assembly 2 having a nose section 3 in which a U-folded nose portion 4C of an optical fiber is embedded. The U-folded nose portion 4C interconnects two elongate sections 4A and 4B of the optical fiber. The U-folded nose portion 4C is heated to a temperature above 1000 degrees Celsius and stretched during the bending process, whereupon the red-hot bent U-folded nose portion is embedded in a body 5 of material

having a lower index of reflection than the U-folded nose portion 4C of the optical fiber 4, thereby creating optical continuity in the U-folded nose portion 4C. ~~A~~ One suitable method for bending a fiber optical cable into a U-shaped configuration is disclosed in US ~~patent~~ Pat. No. 5,138,676. The nose section 3 comprises an impact resistant outer coating 6 and has a generally cylindrical shape. The outer width of the nose section 3 has an outer width W which is less than 1 cm. In a preferred embodiment the method of the present invention the guide conduit 1 has an internal width less than 1 cm and the nose section 3 has an outer width less than 5 mm. In a particularly preferred embodiment of the method according to the invention the guide conduit 1 has an internal width less than 5 mm and the nose section 3 has an outer width W less than 3 mm. The small internal and external width of the guide conduit 1 generate a distributed sensing assembly which is compact and non-intrusive and which can be easily inserted into narrow passageways, such as hydraulic power and control conduits, in an underground well for the production of oil and/or gas.--

On page 9, after line 18, please insert the following paragraphs:

--The fiber optical cable is heated when it is stretched and the bent section of stretched fiber optical cable is embedded in a nose-shaped body of material having a lower light reflection index than the stretched fiber optical cable embedded therein and that said nose shaped body has a substantially cylindrical shape and an outer diameter less than 3 mm. A suitable method for bending a fiber optical cable into a U-shaped configuration is disclosed in U.S. Pat. No. 5,138,676.

In an alternative embodiment of the method according to the invention the two sections of distributed sensing fiber optical cable are interconnected by a nose section which comprises a light reflecting element, such as a mirror, which is configured to transmit light emitted from a proximal end of one section of distributed sensing fiber optical cable into a proximal end of the other section of distributed sensing fiber optical cable.

In some embodiments of the method according to the invention it is preferred that the light transmitting and receiving unit is configured to transmit light pulses alternatingly into each distal end of each of said two sections of distributed sensing fiber optical cable and to acquire distributed sensing data from light backscattered from different points along the length of the fiber optical cables to the distal end into which the light pulses are transmitted.

The distributed sensing fiber optical assembly installed by the method according to the invention may be configured as a distributed temperature and/or distributed pressure sensor assembly, and each section of distributed sensing fiber optical cable may pass through a reference region in which the fiber optical cable is exposed to a known temperature and/or hydraulic pressure. In such case said reference region may be formed by a chamber in which the temperature and pressure are monitored, in which chamber a selected length of each section of distributed sensing optical fiber is coiled.

Suitably, the nose section and at least a substantial part of the distributed sensing fiber optical cables interconnected thereby are inserted into the guide conduit by pumping a fluid from one end towards another end of the guide conduit.

The guide conduit may be installed within or in the vicinity of an elongate fluid transfer flowline, such as an underground inflow region of an oil and/or gas production well.--

On page 10, above line 1, insert --We claim:--